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AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in this application.

LISTING OF CLAIMS:

1. (Previously Presented) A gable top package for pourable food products produced by folding and sealing a sheet packaging material and comprising a gabled top portion including front and back sloping top walls joined together at a top transversal seal and a pair of side top walls connecting respective lateral edges of said front and back sloping top walls, each of said side top walls being obtained by folding a respective portion of the sheet packaging material along predetermined crease lines delimiting a number of panels, wherein said crease lines are determined among a plurality of possible crease lines designed so as the forming of the side top walls is performed by rotations of said panels as rigid bodies about their respective crease lines.

2. (Previously Presented) A package as claimed in claim 1, wherein the crease lines for forming the side top walls are obtained by choosing at least a value of a top angle formed, along each side top wall, between opposite edges thereof converging to said top transversal seal, and a value of the length of one of said front and back sloping top walls along a direction crosswise to said top transversal seal.

3. (Previously Presented) A package as claimed in claim 1, wherein the package is obtained from an intermediate pack having a prismatic main portion and

at least a tapered end portion delimited by said top transversal seal, defining said front and back sloping top walls and provided with opposite protruding lateral flaps designed to be folded out of a package top volume available for the food product for obtaining said side top walls.

4. (Previously Presented) A package as claimed in Claim 3, wherein each of said lateral flaps has one side adjacent to one of said front and back sloping top walls and another side formed by a relative end portion of said top transversal seal and positioned adjacent to another of said front and back sloping top walls.

5. (Previously Presented) A method for dimensioning a gable-top package for pourable food products obtained by folding and sealing a sheet packaging material, said package comprising a gabled top portion including front and back sloping top walls joined together at a top transversal seal, and a pair of side top walls connecting respective lateral edges of said front and back sloping top walls and obtained by folding respective portions of the sheet packaging material along predetermined crease lines delimiting a number of panels, said method comprising determining a position and extension of said crease lines so that forming of the side top walls is performed by rotations of said panels as rigid bodies about their respective crease lines.

6. (Previously Presented) A method as claimed in claim 5, wherein said determining of the position and extension of said crease lines is performed by choosing desired values of at least a top angle formed, along each side top wall,

between opposite edges thereof converging to said top transversal seal, and a length of one of said front and back sloping top walls along a direction crosswise to said top transversal seal.

7. (Currently Amended) A method as claimed in claim 6, wherein said determining of the position and extension of said crease lines comprises designing, in a portion of said sheet packaging material destined to form the gabled top portion of the package:

- a first transversal crease line ~~(31)~~ delimiting said top transversal seal;

- a second transversal crease line forming horizontal corners of said gabled top portion and positioned at a distance from said first transversal crease line equal to said chosen length;

- a number of longitudinal crease lines delimiting, together with said first and second transversal crease lines, a couple of first zones defining said side top walls and a couple of second zones defining said front and back sloping top walls, said longitudinal crease lines forming with respective portions of said second transversal crease line external to said first zones, respective angles equal to said chosen top angle; and

- a number of internal crease lines, which are located within each said first zone and whose orientation is determined by geometric relations obtained by considering that the panels have to be rotated as rigid bodies during the forming of the gabled top portion.

8. (Previously Presented) A method as claimed in claim 7, wherein said internal crease lines comprise, for each said first zone, a couple of first inclined crease lines joined at said first transversal crease line and delimiting an isosceles triangle with said second transversal crease line, wherein the designing of said internal crease lines in each first zone comprises calculating an angle formed by each first inclined crease line with a portion of said second transversal crease line defining a side of said isosceles triangle, through the formula:

$$\beta = \text{arctg}\left(\frac{1}{c/2}\right),$$

wherein c references a width of the package to be formed.

9. (Previously Presented) A method as claimed in claim 8, wherein said internal crease lines comprise, for each said first zone, three second inclined crease lines extending from an intermediate point located within said isosceles triangle to respective vertex thereof, wherein the designing of said internal crease lines comprises calculating an angle formed by said second inclined crease lines with respective said first inclined crease lines through the formula:

$$\beta_2 \frac{\beta - (\theta_1 - \theta)}{2}$$

wherein θ references an angle formed between each longitudinal crease line and an adjacent first inclined crease line, whilst θ_i references an angle formed by each longitudinal crease line with a portion of said second transversal crease line defining

a side of said isosceles triangle, after folding of the gabled top portion has been completed.

10. (Currently Amended) A method as claimed in claim 9, wherein said internal crease lines comprise, for each said first zone, a third inclined crease line (~~65; 66~~) extending from said intermediate point to said first transversal crease line, intersecting one of said first inclined crease lines and divided by said one of said first inclined crease lines into a first and a second portion forming therebetween angles different from 180° and located outside and inside said isosceles triangle, respectively, wherein said designing of said internal crease lines comprises calculating an angle formed by said first portion of said third inclined crease line with the portion of said first transversal crease line located inside each said first zone, through the formula:

$$\gamma = \frac{\alpha - \left(2 \operatorname{arcsen}\left(\frac{c/2}{l_1}\right) - \alpha\right)}{2},$$

wherein l_1 references a length of longitudinal crease lines.

11. (Currently Amended) A sheet packaging material adapted to be folded ~~along~~ ~~predetermined crease~~ lines ~~and~~ sealed for producing a gable-top package for pourable food products, ~~wherein said crease lines are dimensioned according to the method as claimed in claim 5~~ the sheet packaging material comprising predetermined crease lines arranged and configured to produce the gable-top

package having front and back sloping top walls joined together at a top transversal seal and a pair of side top walls connecting respective lateral edges of the front and back sloping top walls by folding respective portions of the sheet packaging material along the predetermined crease lines delimiting a plurality of panels, said crease lines being positioned and extending on the sheet packaging material so that formation of the side top walls is performed by rotations of the panels as rigid bodies about their respective crease lines.

12. (Currently Amended) A sheet packaging material adapted to be folded ~~along~~ ~~predetermined crease lines~~ and sealed for producing a gable-top package for pourable food products according to Claim 11, wherein said crease lines ~~are~~ ~~dimensioned according to the method as claimed in claim 6~~ delimit seven of said panels.

13. (Currently Amended) A sheet packaging material adapted to be folded ~~along~~ ~~predetermined crease lines~~ and sealed for producing a gable-top package for pourable food products according to Claim 11, wherein said crease lines ~~are~~ ~~dimensioned according to the method as claimed in claim~~ 7 comprise:

a first transversal crease line delimiting a region forming the top transversal seal upon folding the sheet packaging material;

a second transversal crease line forming horizontal corners of the gabled top portion upon folding the sheet packaging material and positioned at a distance from said first transversal crease line;

a plurality of first longitudinal crease lines delimiting, together with the first and second transversal crease lines, plural first zones defining the side top walls and plural second zones defining the front and back sloping top walls, the first longitudinal crease lines forming with respective portions of the second transversal crease line external to the first zones, respective angles equal to a top angle; and

a plurality of internal crease lines located within each of the first zones and oriented to permit the panels to be rotated as rigid bodies during the forming of the gabled top portion.

14. (Currently Amended) A sheet packaging material adapted to be folded ~~along predetermined crease lines~~ and sealed for producing a gable-top package for pourable food products according to Claim 13, wherein ~~said crease lines are dimensioned according to the method as claimed in claim 8~~ the internal crease lines comprise, for each first zone, a plurality of first inclined crease lines joined at the first transversal crease line and delimiting an isosceles triangle with the second transversal crease line, the crease lines being configured by calculating an angle β formed by each first inclined crease line with a portion of the second transversal crease line defining a side of the isosceles triangle according to a formula:

$$\beta = \operatorname{arctg}\left(\frac{1}{c/2}\right),$$

wherein c is a width of the package to be formed determined by a distance between two second longitudinal crease lines forming side corners of the package upon folding.

15. (Currently Amended) A sheet packaging material adapted to be folded ~~along~~ predetermined ~~crease~~ lines and sealed for producing a gable-top package for pourable food products according to Claim 14, wherein ~~said crease lines are dimensioned according to the method as claimed~~ in claim ~~9~~ the internal crease lines comprise, for each first zone, three second inclined crease lines extending from an intermediate point located within said isosceles triangle to respective vertices of the isosceles triangle, the crease lines being configured by calculating an angle formed by said second inclined crease lines with respective said first inclined crease lines according to a formula:

$$\beta_2 \frac{\beta - (\theta_i - \theta)}{2}$$

wherein θ is an angle formed between each first longitudinal crease line and an adjacent first inclined crease line, θ_i is an angle formed by each first longitudinal crease line with a portion of the second transversal crease line defining a side of the isosceles triangle, after folding of the gabled top portion has been completed.

16. (Currently Amended) A sheet packaging material adapted to be folded ~~along predetermined crease lines~~ and sealed for producing a gable-top package for pourable food products according to Claim 15, wherein ~~said crease lines are dimensioned according to the method as claimed in claim 10~~ the internal crease lines comprise, for each ~~said~~ first zone, a third inclined crease line ~~(65; 66)~~ extending from said intermediate point to said first transversal crease line, intersecting one of

said first inclined crease lines and divided by said one of said first inclined crease lines into a first and a second portion forming therebetween angles different from 180° and located outside and inside said isosceles triangle, respectively, ~~wherein said designing of said internal~~ crease ~~lines comprises calculating~~ the crease lines being configured by calculating an angle γ formed by said first portion of said third inclined crease line with the portion of said first transversal crease line located inside each said first zone, through the formula:

$$\gamma = \frac{\alpha - \left(2\,\text{arcsen}\left(\frac{c/2}{l_1}\right) - \alpha\right)}{2},$$

wherein l_1 references a length of longitudinal crease lines.